

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date
24 June 2004 (24.06.2004)

PCT

(10) International Publication Number
WO 2004/052594 A2

(51) International Patent Classification⁷: **B25B**

[US/US]; 841 Nob Hill Court, Gahanna, OH 43230 (US). FAULKNER, Lynn [US/US]; 410 Six Pence Circle, Westerville, OH 43081-5709 (US). HAUBERT, Thomas, A. [US/US]; 274 Winthrop Road, Columbus, OH 43214 (US). Gegenheimer, C., Michael [US/US]; 1304 Norwell Drive, Columbus, OH 43220 (US). STEIN, Holly, A. [US/US]; 616 West 2nd Avenue, Columbus, OH 43201 (US). SCHELHORN, Jean, E. [US/US]; 108 Edgewood Drive, Granville, OH 43023 (US).

(21) International Application Number:
PCT/US2003/039511

(74) Agent: KLEIN, Richard, M.; Fay, Sharpe, Fagan, Minnich & McKee, LLP, 1100 Superior Avenue, 7th Floor, Cleveland, OH 44114 (US).

(22) International Filing Date:
10 December 2003 (10.12.2003)

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(25) Filing Language: English

(26) Publication Language: English

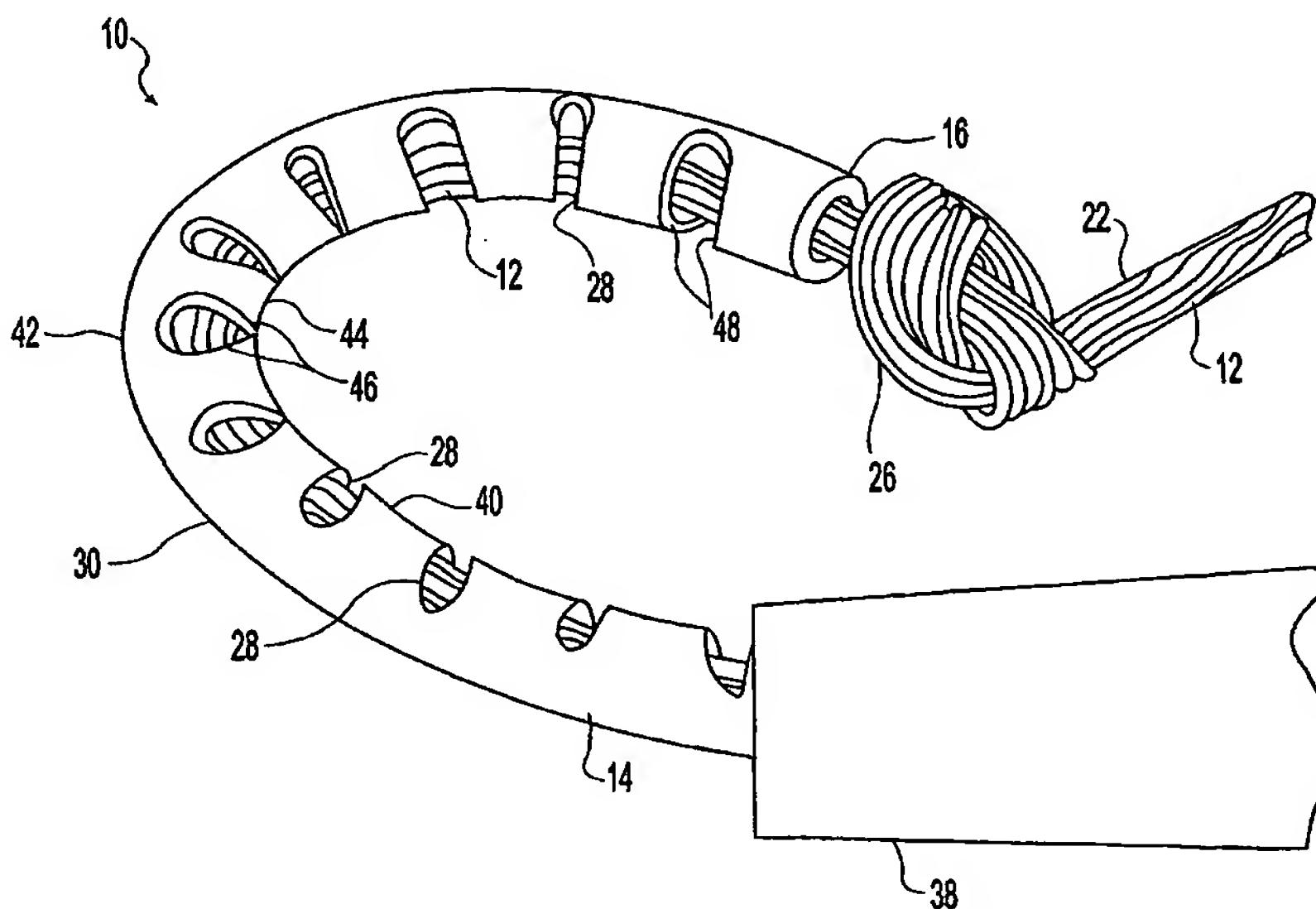
(30) Priority Data:

60/432,558	10 December 2002 (10.12.2002)	US
60/432,563	10 December 2002 (10.12.2002)	US

(84) Designated States (*regional*): ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),

[Continued on next page]

(54) Title: ARTICULATED ELEMENTS AND METHODS FOR USE



(57) Abstract: The present invention relates to a one-step fastening device, a process for creating a fastener utilizing such a device, and the end fastener produced thereby. In this regard, the invention uses an outer, hollow fastener material that can be partially compressed under tension at designated areas (i.e., a compression member) and an inner activation or tensioning member. The compression of the outer fastener material occurs at one or more flexible areas or compression features specifically located on the longitudinal axis of the material. As a result, the outer compression member is capable of being distorted or bent under tension to produce a predetermined configuration. The device described herein has the ability to form specific and controllable fasteners of designated shapes and configurations. Methods for fastening, snaring, gripping, cutting, and manipulating material using the device in a confined space are also provided.

WO 2004/052594 A2